Table 5.1 Current Response Times – All Emergency Incidents

Element	Adopted Standard	Mean	80th Percentile	90th Percentile
Alarm Rec'd Period	1:00	0:43	1:07	1:18
Turnout Time	1:00	0:43	1:05	1:17
Travel Time (1st arriving company)	4:00	2:36	3:59	4:42
Total Reflex Time (Customer Interval)	6:00	4:08	6:11	7:17

Figure 5.2 Flashover: Time – Temperature Relationship

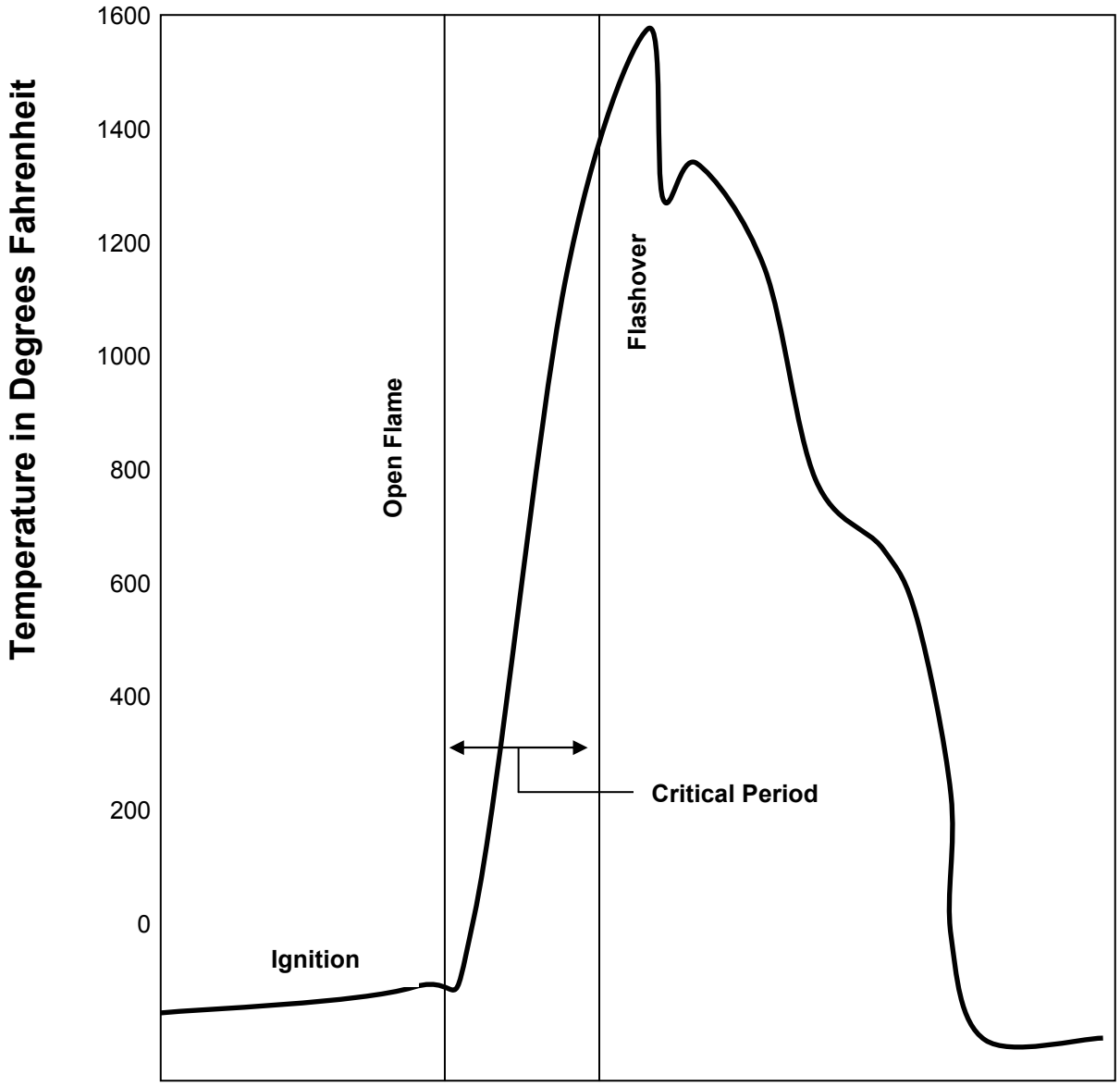


Figure 5.3

The Significance of Flashover	
Pre-Flashover: Limited to one room Requires smaller attack lines Search and rescue is easier Initial assignment can handle	**Post-Flashover:** May spread beyond one room Requires more and larger attack lines Compounds search and rescue Requires additional companies

Figure 5.4 Time Versus Products of Combustion

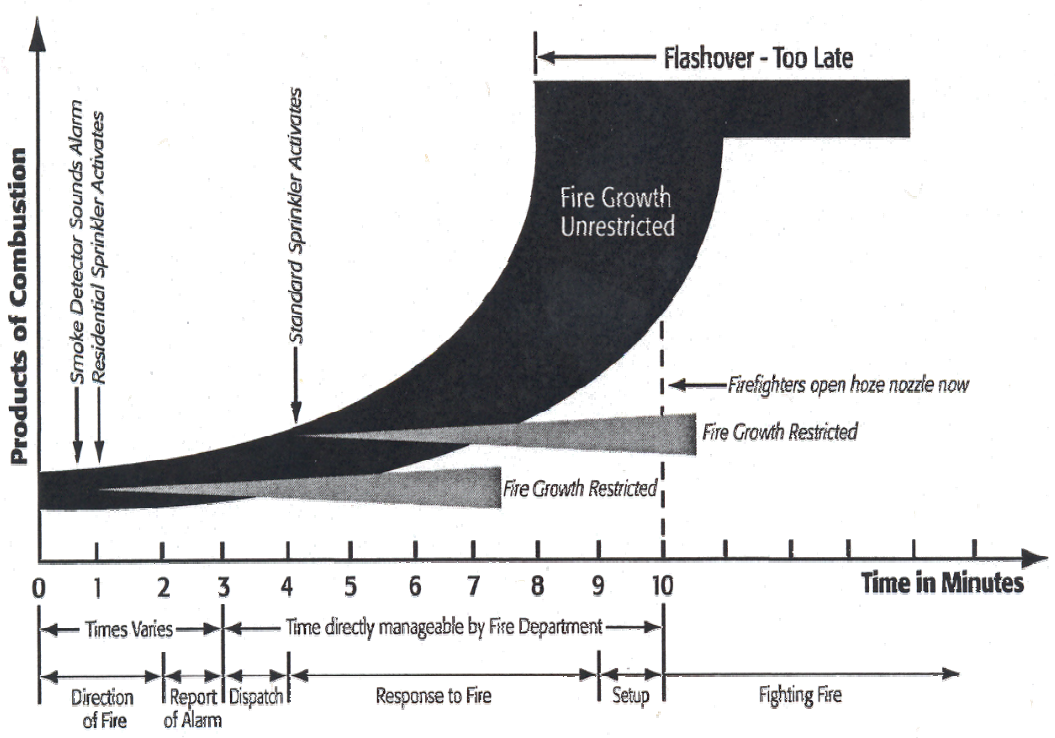


Table 5.2 Personnel Required for Initial Deployment Tasks

Critical Task	Minimum Risk	Moderate Risk	Significant Risk	Maximum Risk
Size Up and Command	1^	1	1	1
Accountability	1^	1	1	1
Offensive Fire Attack	2^	2	4	4-6
Pump Operations/Water Supply	1	1	1	2
Search and Rescue		2	2	4
Ventilation		2	2	4
Aerial Device Operator*		1	1	1
Sub-total: Initial Attack	**3-5^**	**10**	**12**	**17-19**
Rapid Intervention Team		2	4	4-6
Back Up Lines		2	4	4
Salvage and Overhaul	**	**	**	**
Rehabilitation		2	2	4
Designated Safety Officer	1^	1	1	1
Sub-total: Initial Support	**1**	**7**	**11**	**13-15**
Total: Initial Attack and Initial Support	**4-6^**	**17**	**23**	**30-34**

^ The engine company officer can serve multiple roles at minimum risk incidents.
* An aerial device operator would only be necessary if such device is being deployed at the incident.
** Salvage and overhaul is addressed by effective response force as priorities shift.

Table 5.3 Critical Tasks Cardiac Arrest/Stroke/Overdose Multi-System Trauma

Critical Task	Cardiac Arrest	Stroke	Multi-System Trauma
Patient Assessment	2 per patient	2 per patient	2 per patient
Airway Management/Intubation	2 per patient	2 per patient	2 per patient
Cardiac Defibrillation	1	N/A	N/A
CPR	1	N/A	N/A
EKG Monitoring	1	1	1
IV/Pharmocology	1	1	1
Splint/Bandage/Immobilization	N/A	N/A	1
Patient Lifting/Packaging	2 – 4	2 – 4	2 – 4
Medical Information Collection	1	1	1

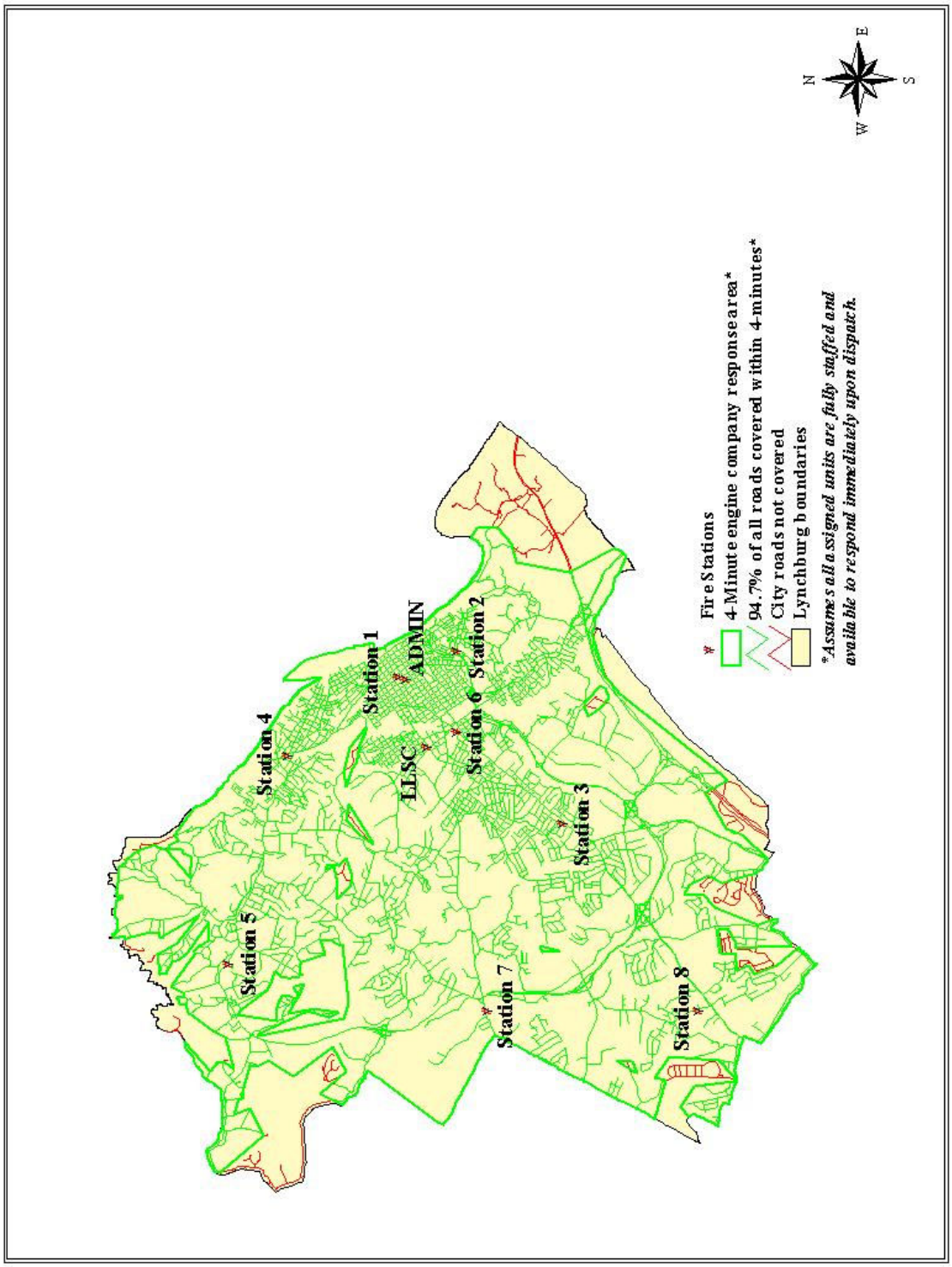
Table 5.4 General Hazardous Materials Team Assignments

Critical Task	
Incident Command and Safety Officer	2
Site Control (Detection and Monitoring)	2
Referencing	2
Entry and Backup Teams	4
Decontamination and medical group	2

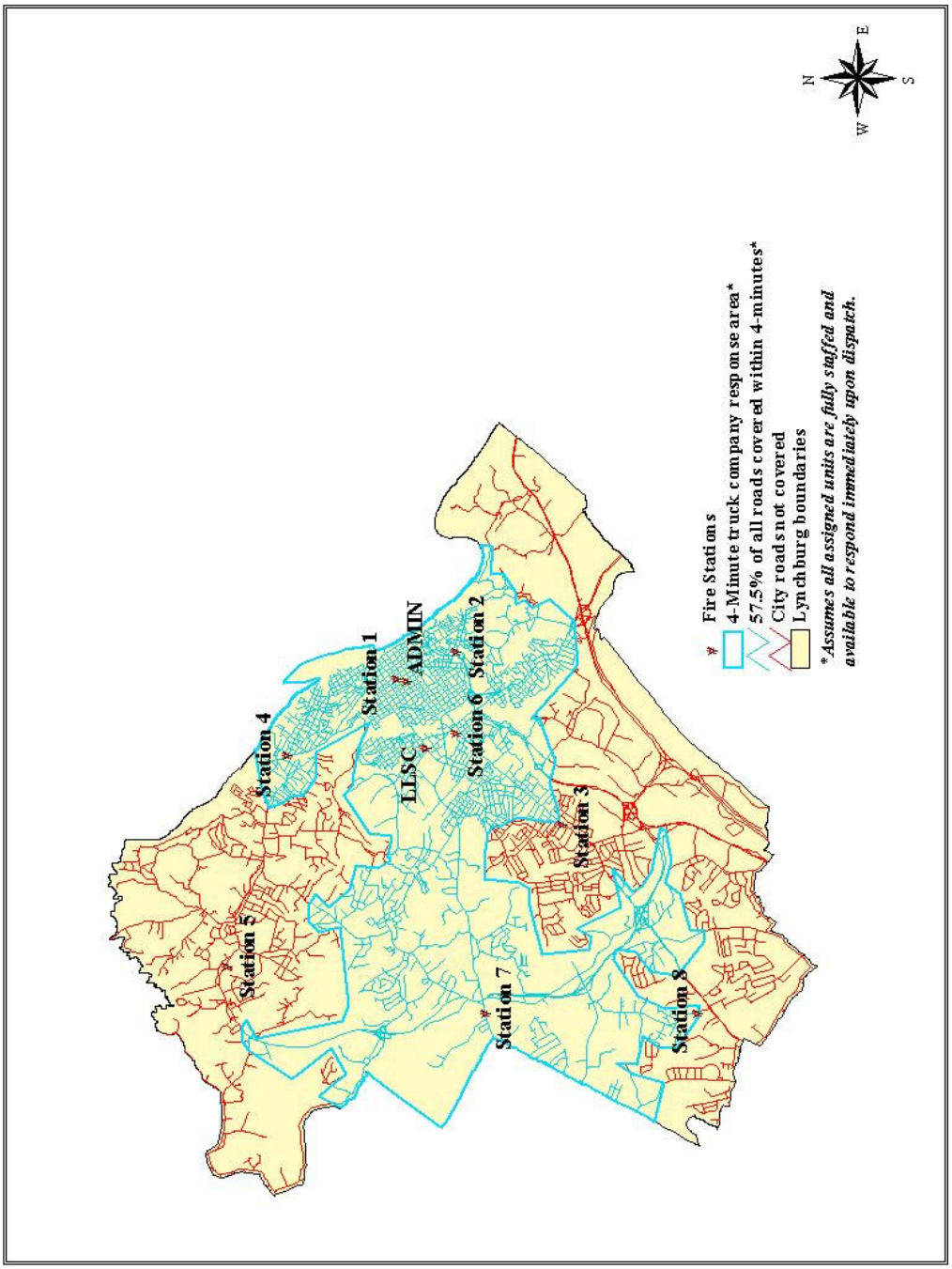
Figure 5.6 Baseline Fire Flow Response Goals

Risk Types	No. of Companies	Company Due-In (Time in Minutes)		
		First	Second	Third plus
Maximum 4,000+ gpm	5	4	5	8
Significant 3,000+ gpm	4	4	6	8
Moderate 1,000 - 2,000+ gpm	3	4	8	8
Low < 1,000 gpm	1	4	-	-

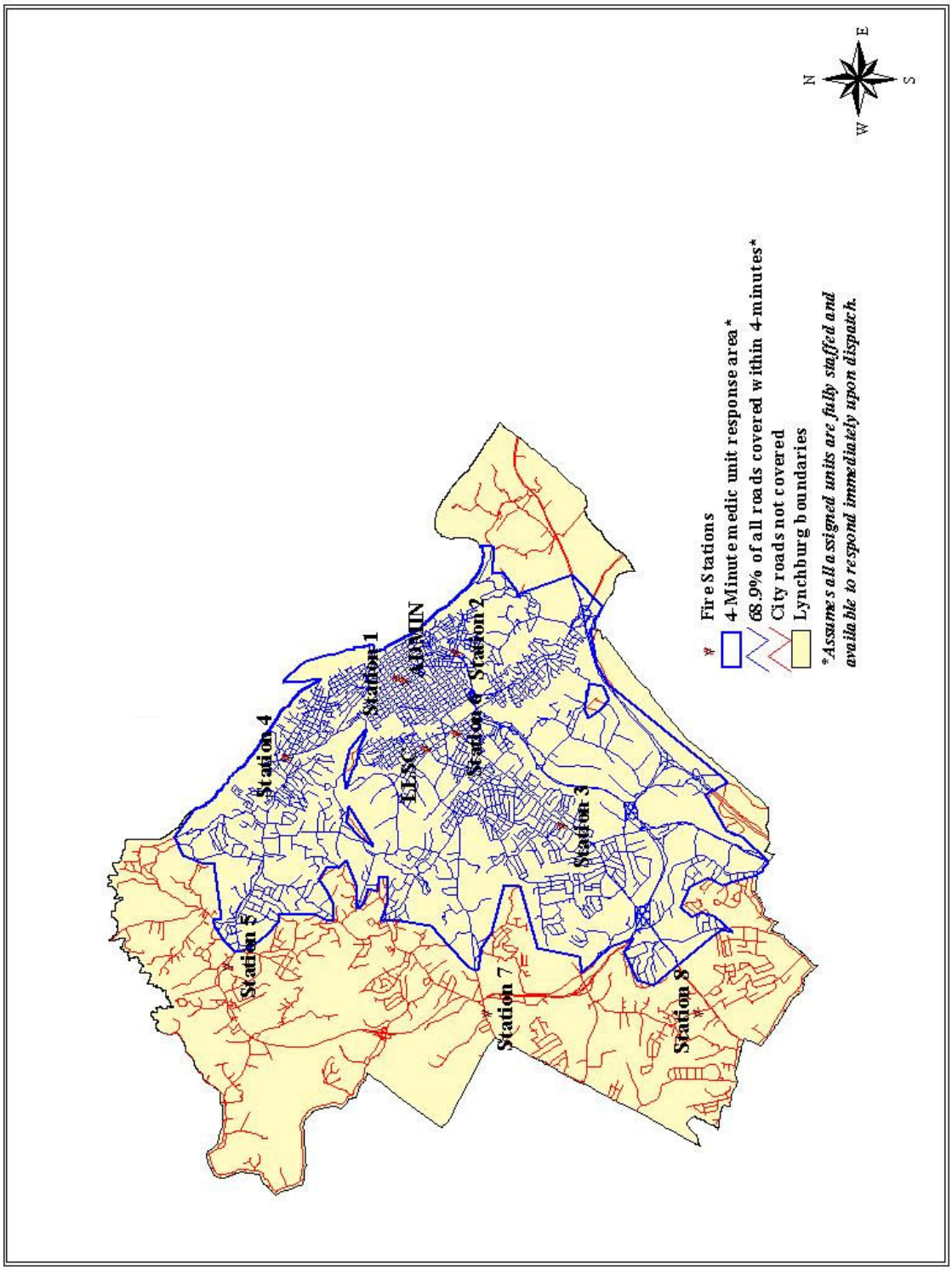
Map 6.1 Four-Minute Engine Company Response Area



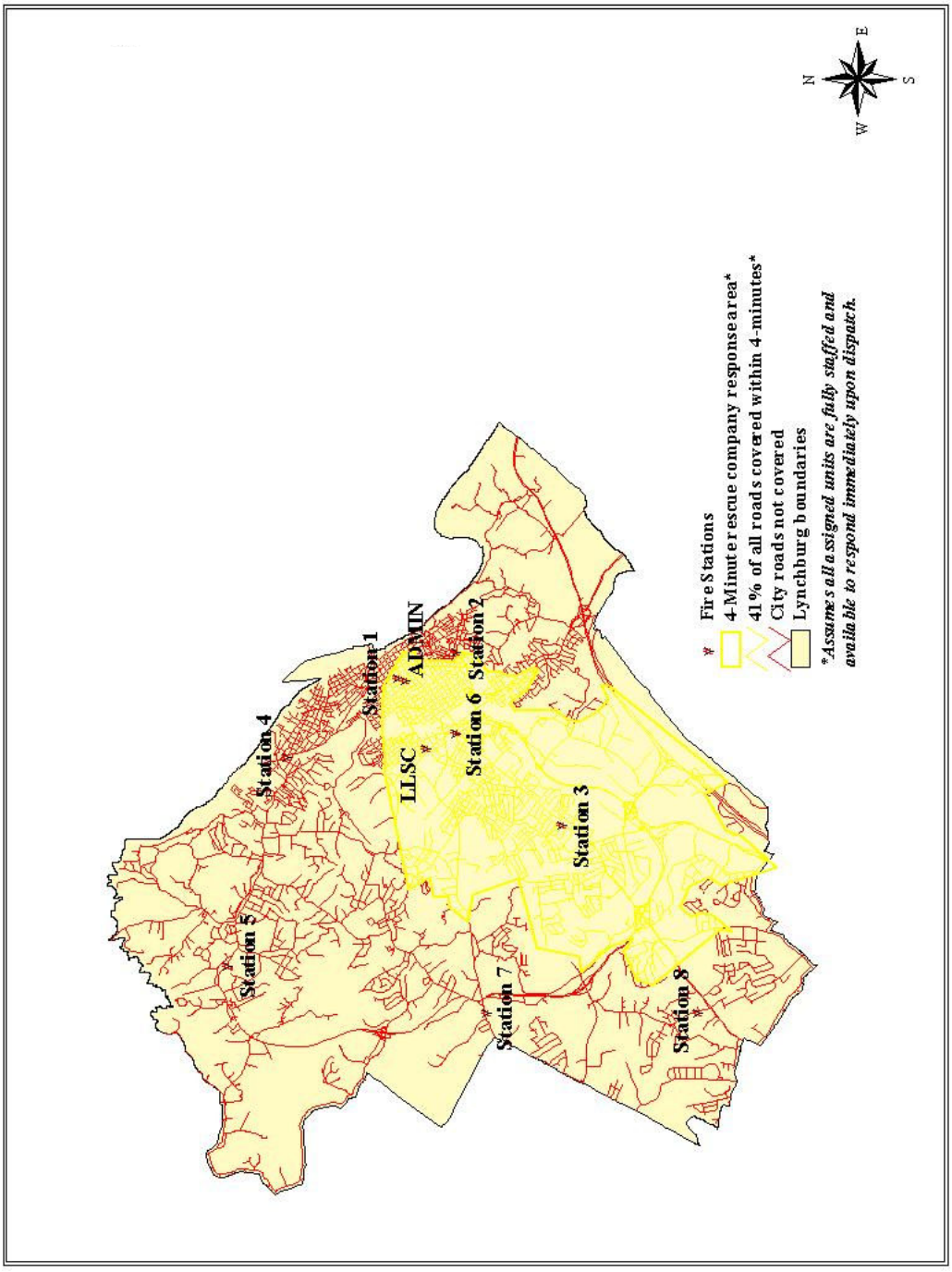
Map 6.2 Four-Minute Truck Company Response Area



Map 6.3 Four-Minute ALS Medic Unit Response Area



Map 6.4 Four-Minute Rescue Company Response Area



Map 6.5 Eight-Minute Engine Company Response Area

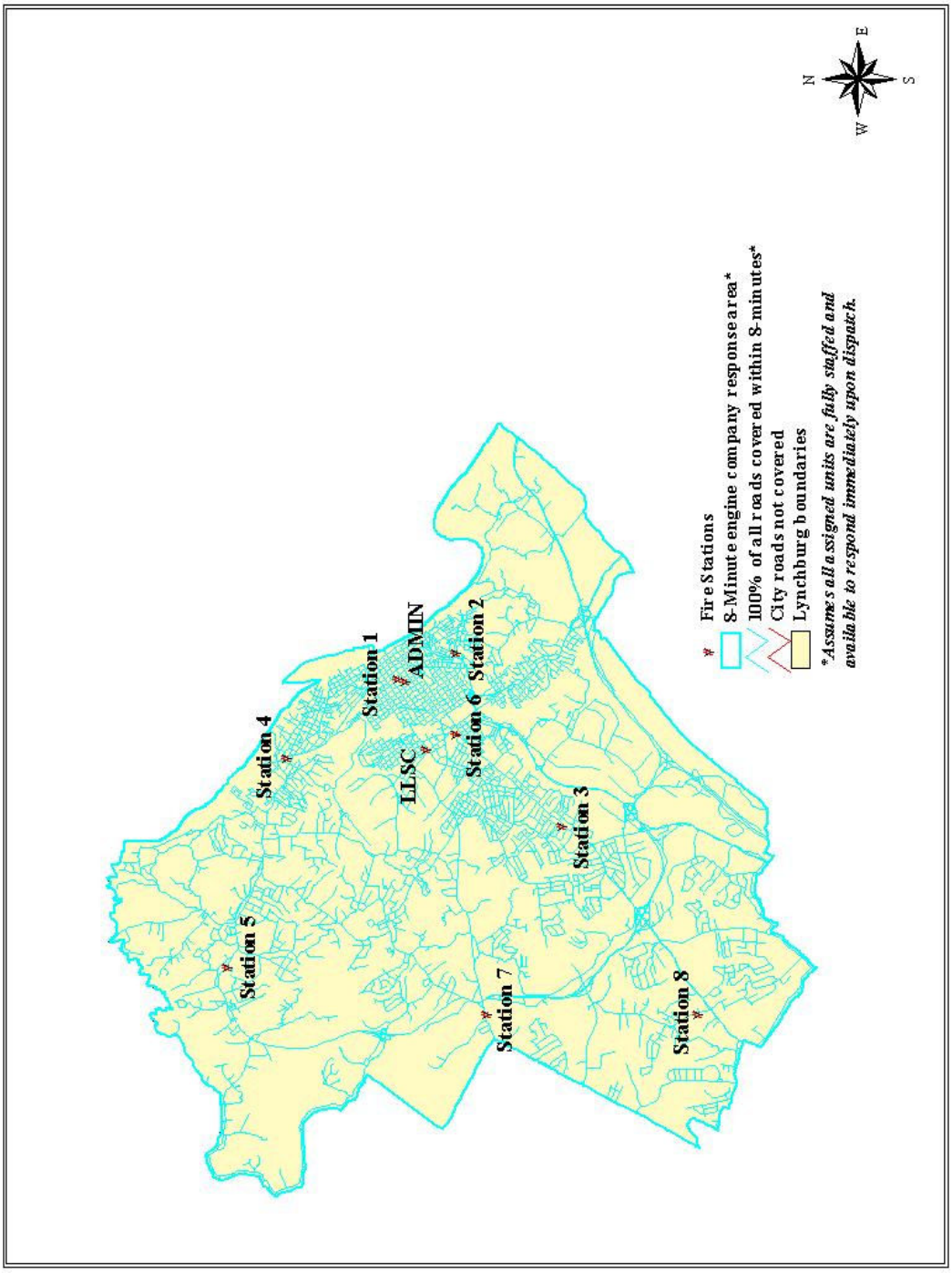
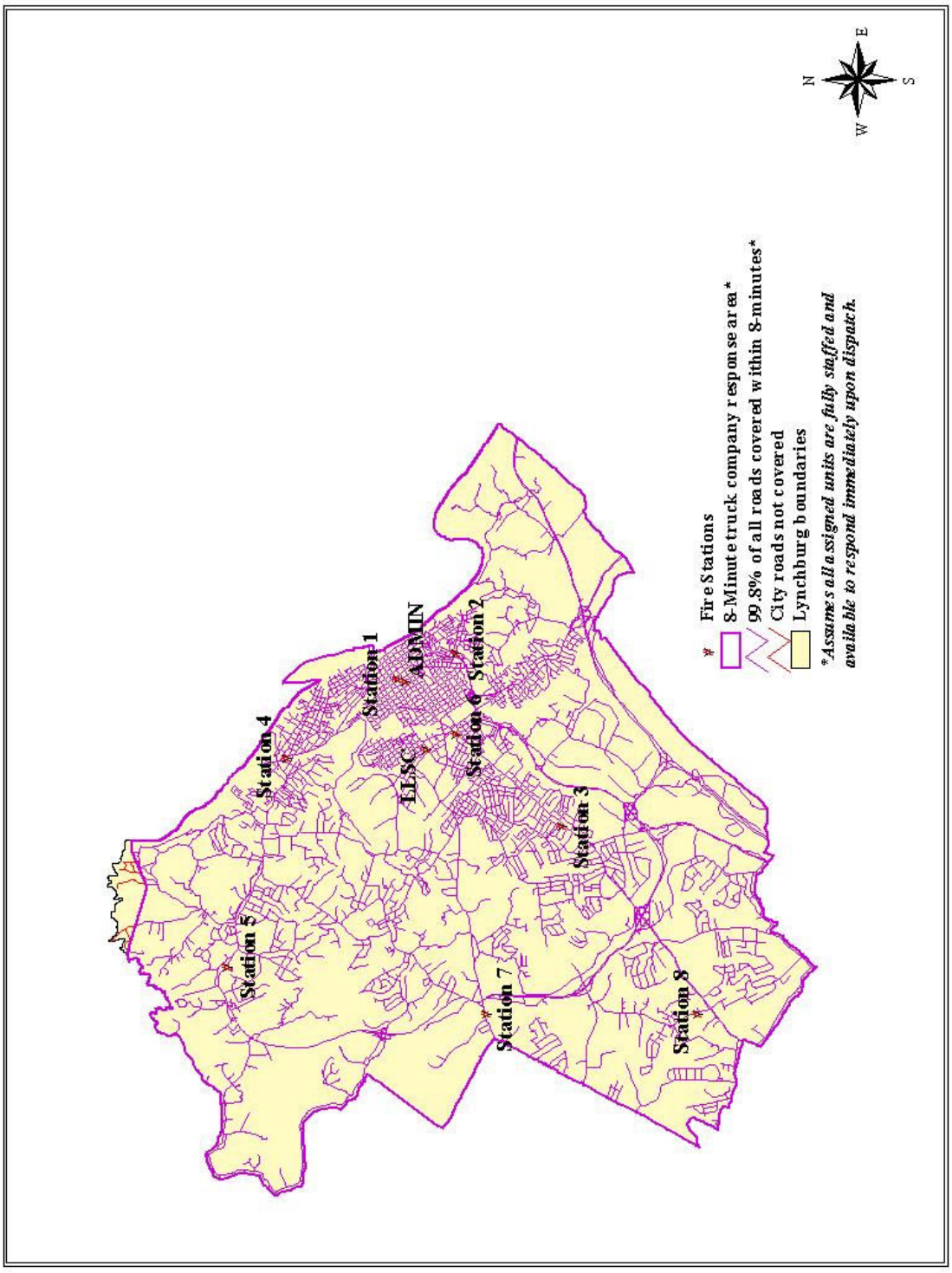
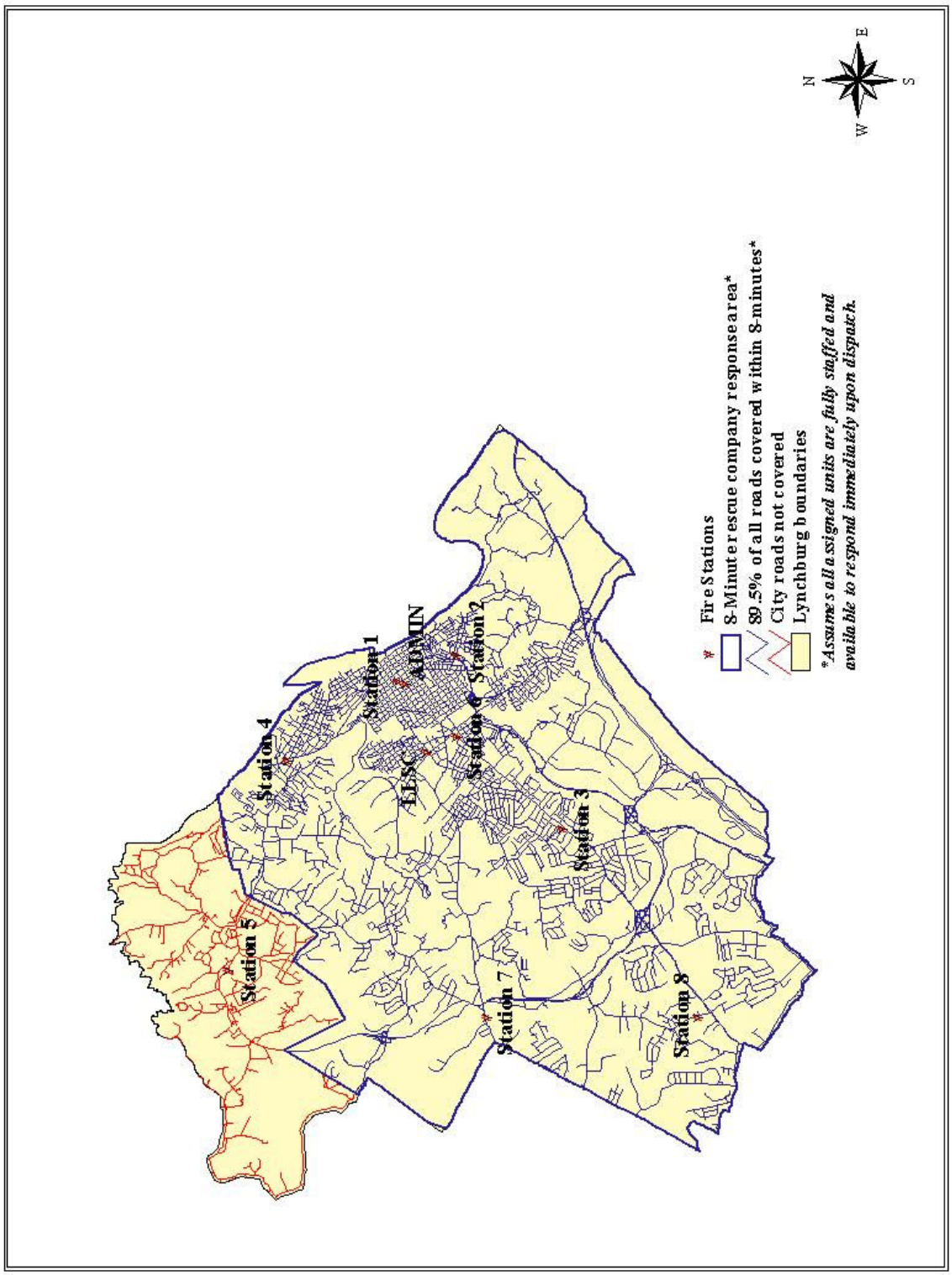


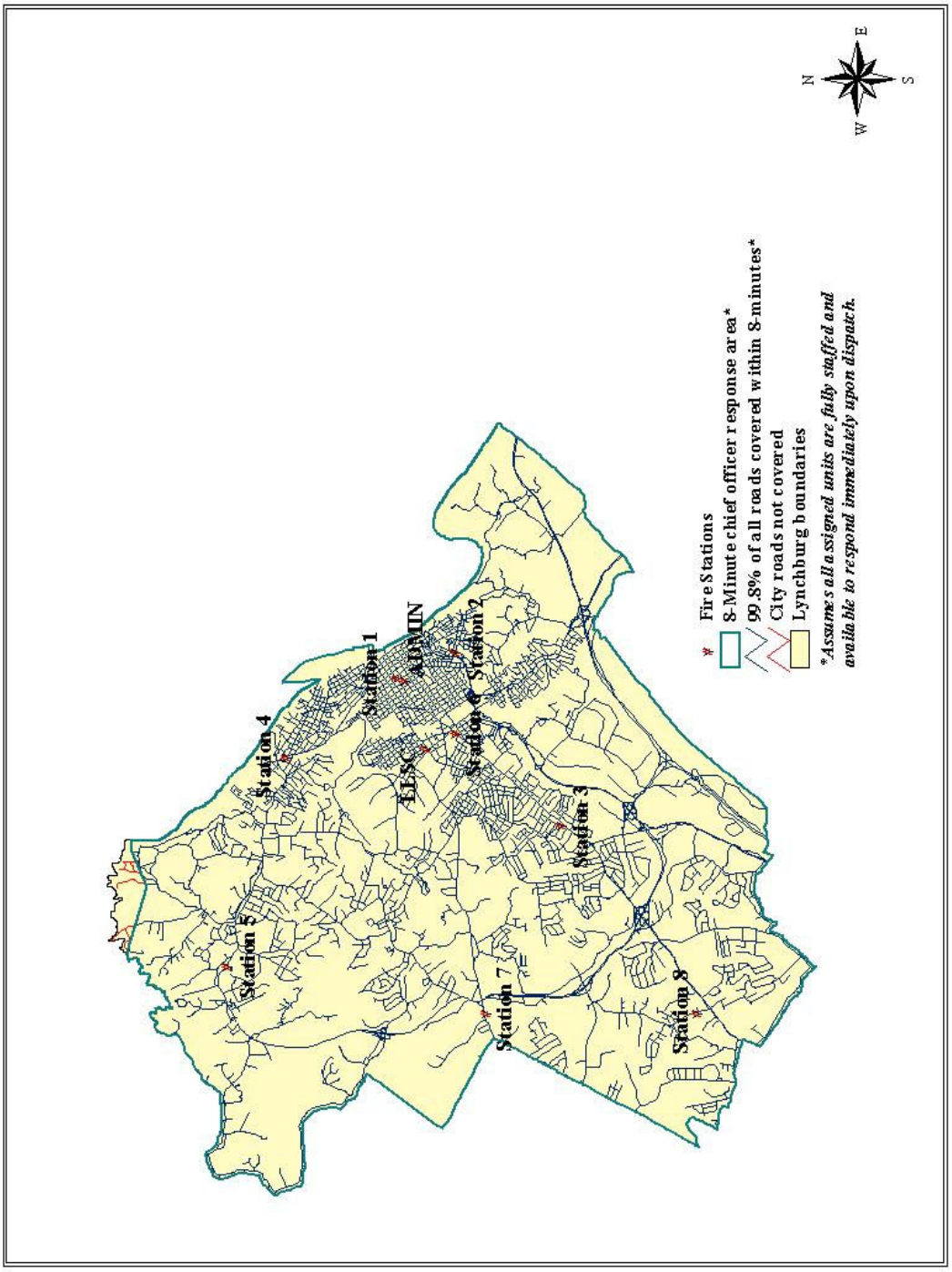
Figure 6.6 Eight-Minute Truck Company Response Area



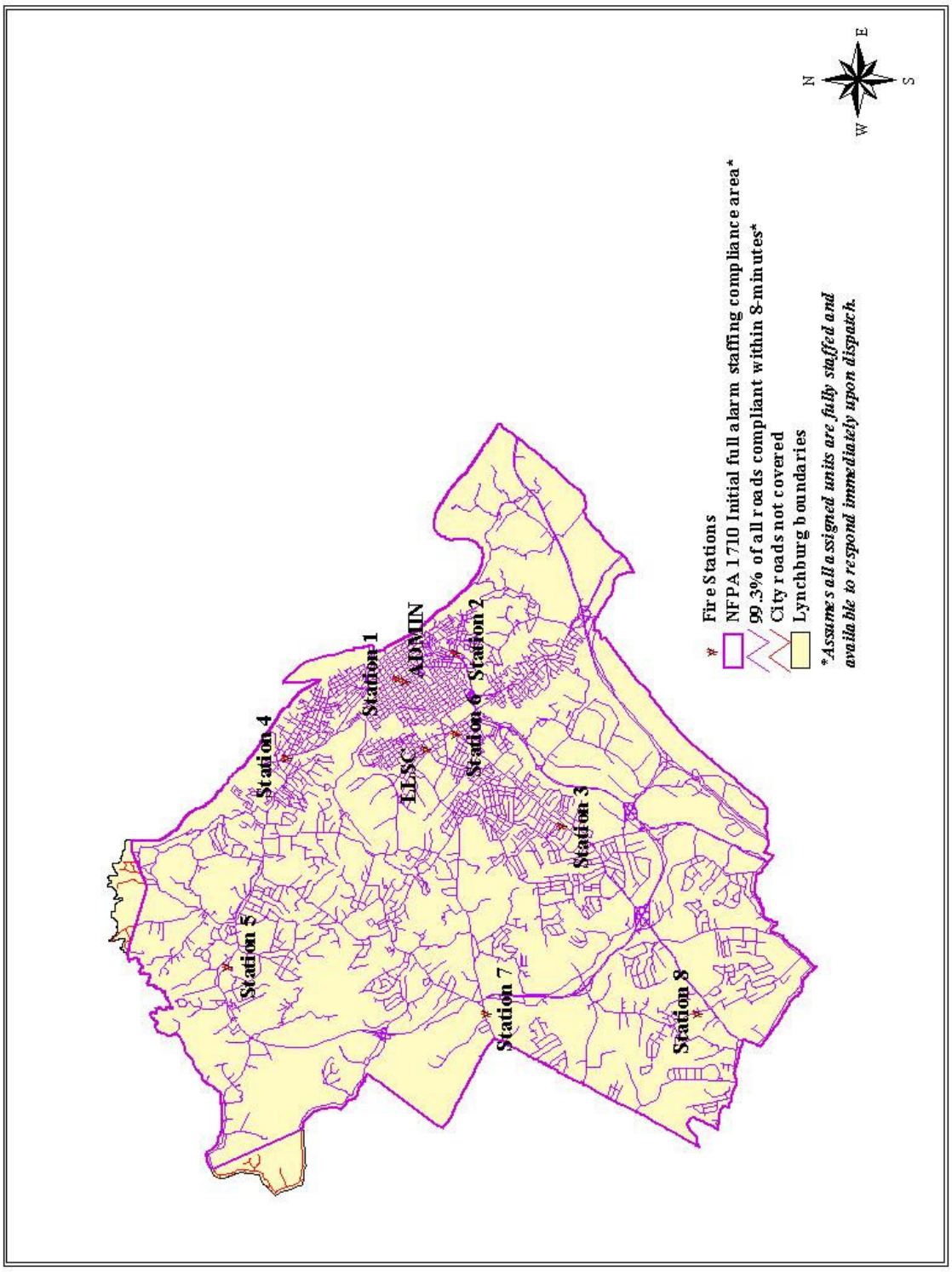
Map 6.7 Eight-Minute Rescue Company Response Area



Map 6.8 Eight-Minute Chief Officer Response Area



Map 6.9 Initial Full Alarm Assignment Staffing Compliance Area



Map 6.10 Eight-Minute ALS Medic Unit Response Area

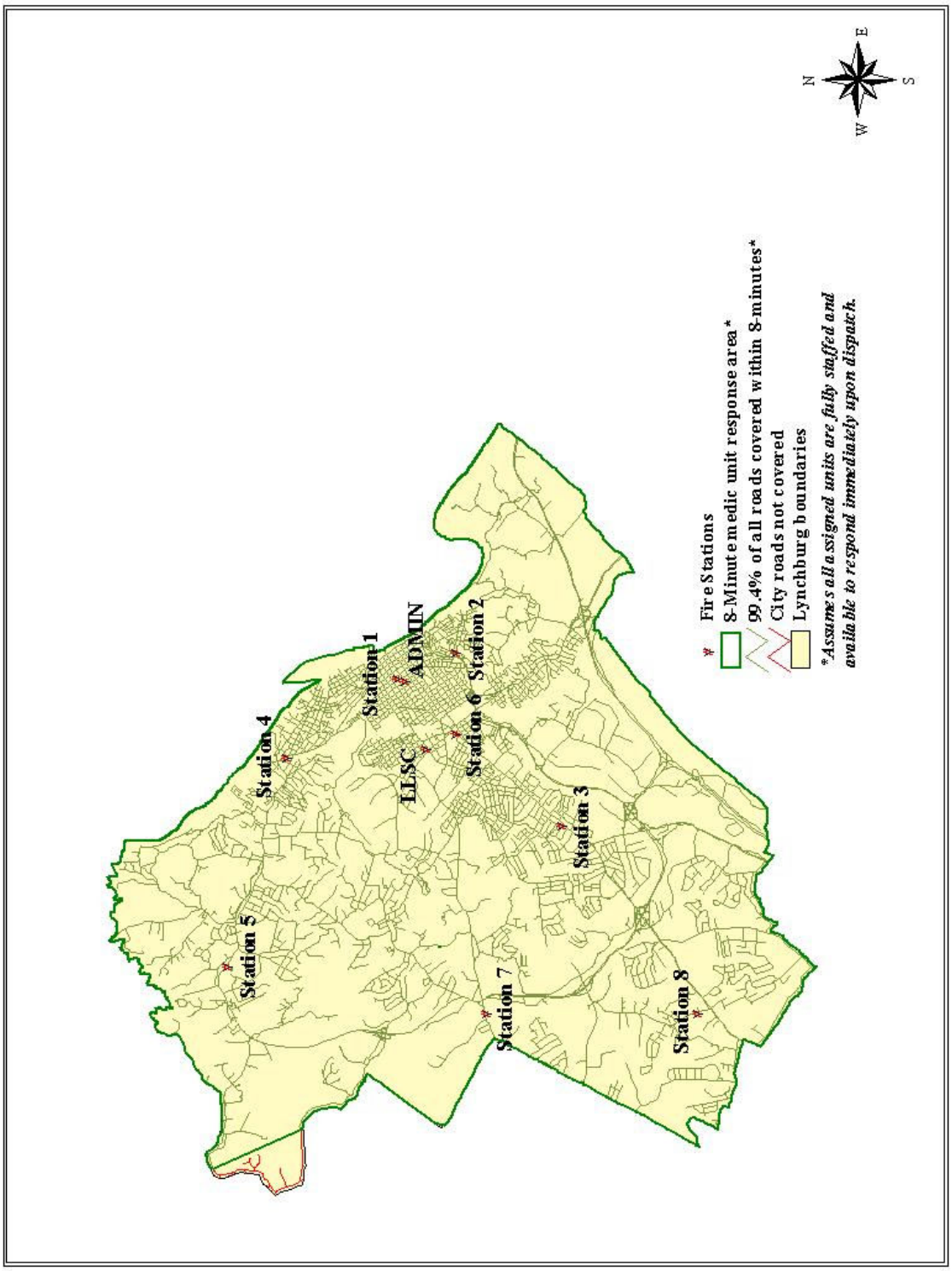


Table 6.1 Total Reflex Time: Structure Fires (Full Complement): 2002-2004

Element	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:18	1:27	
Turnout, First in Engine	1:00	0:58	1:04	
Travel, First in Engine	4:00	3:02	3:28	4:32
Travel, Second in Engine	8:00	4:18	4:39	5:43
Travel, Third in Engine	8:00	4:59	5:22	6:26
Travel, First in Truck	8:00	4:32	4:58	6:02
Travel, First in Rescue	8:00	5:20	5:36	6:40
Travel, First in Medic	8:00	3:49	4:05	5:09
Travel, First in Battalion Chief	8:00	4:33	4:47	5:51
Travel, Full Complement	8:00	5:20	4:45	6:40
Total Reflex Time (Customer Interval)	10:00	7:36	8:07	

Table 6.2 Response Time: Residential Fire Alarms: 2002 -2004

Residential, Element	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:19	1:27	
Turnout, First in Engine	1:00	1:10	1:20	
Travel, First in Engine	4:00	4:23	4:37	5:57
Travel, First in Truck	N/A	N/A	N/A	N/A
Travel, Full Complement	4:00	4:23	4:37	5:57
Total Reflex Time (Customer Interval)	6:00	6:52	7:24	

Table 6.3 Response Time: Commercial Fire Alarms: 2002-2004

Commercial, Element	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:13	1:18	
Turnout, First in Engine	1:00	1:05	1:13	
Travel, First in Engine	4:00	3:21	3:37	4:50
Travel, First in Truck	8:00	4:32	4:49	6:02
Travel, Full Complement	8:00	4:13	4:45	5:58
Total Reflex Time (Customer Interval)	10:00	6:31	7:16	

Table 6.4 Response Time: EMS – Emergent: 2002-2004

EMS - Emergent	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:01	1:09	
Turnout, First in Engine	1:00	1:00	1:09	
Travel, First in Engine	4:00	3:16	3:27	4:36
Travel, First in Medic	8:00	4:06	4:43	5:52
Total Reflex Time (Customer Interval)	10:00	6:07	7:01	

Table 6.5 Response Time: EMS – Urgent: 2002-2004

EMS - Urgent	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:14	1:25	
Turnout, First in Medic	1:00	1:05	1:19	
Travel, First in Medic	4:00	4:30	5:20	6:39
Total Reflex Time (Customer Interval)	6:00	6:49	8:04	

Table 6.6 Response Time: Hazardous Materials Incidents: 2004-2004

Element	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:18	1:32	
Turnout, First in Engine	1:00	1:04	1:12	
Travel, First in Engine	4:00	3:34	4:18	5:30
Travel, Haz Mat Unit	10:00	6:23	7:09	8:21
Travel, First in Rescue	8:00	6:31	6:43	7:55
Travel, First in Medic	8:00	6:22	6:50	8:02
Travel, First in Battalion Chief	8:00	4:45	5:11	6:23
Total Reflex Time (Customer Interval)	12:00	8:45	9:53	

Table 6.7 Response Time: Technical Rescue Incidents: 2002-2004

Element	Adopted Standard	80th Percentile	90th Percentile	90th Percentile, Total Elapsed Time Since Initial Dispatch
Alarm Processing	1:00	1:36	2:00	
Turnout, First in Engine	1:00	0:48	0:57	
Travel, First in Engine	4:00	3:46	4:58	5:55
Travel, Tech Rescue Unit	12:00	13:21	15:33	16:30
Travel, First in Rescue	8:00	6:40	8:19	9:16
Travel, First in Medic	8:00	4:35	5:48	6:45
Travel, First in Battalion Chief	8:00	2:26	4:17	5:14
Total Reflex Time (Customer Interval)	14:00	17:57	18:30	

Figure 7.1 Analysis of Response Reliability By First Due Engine: 2004-2004

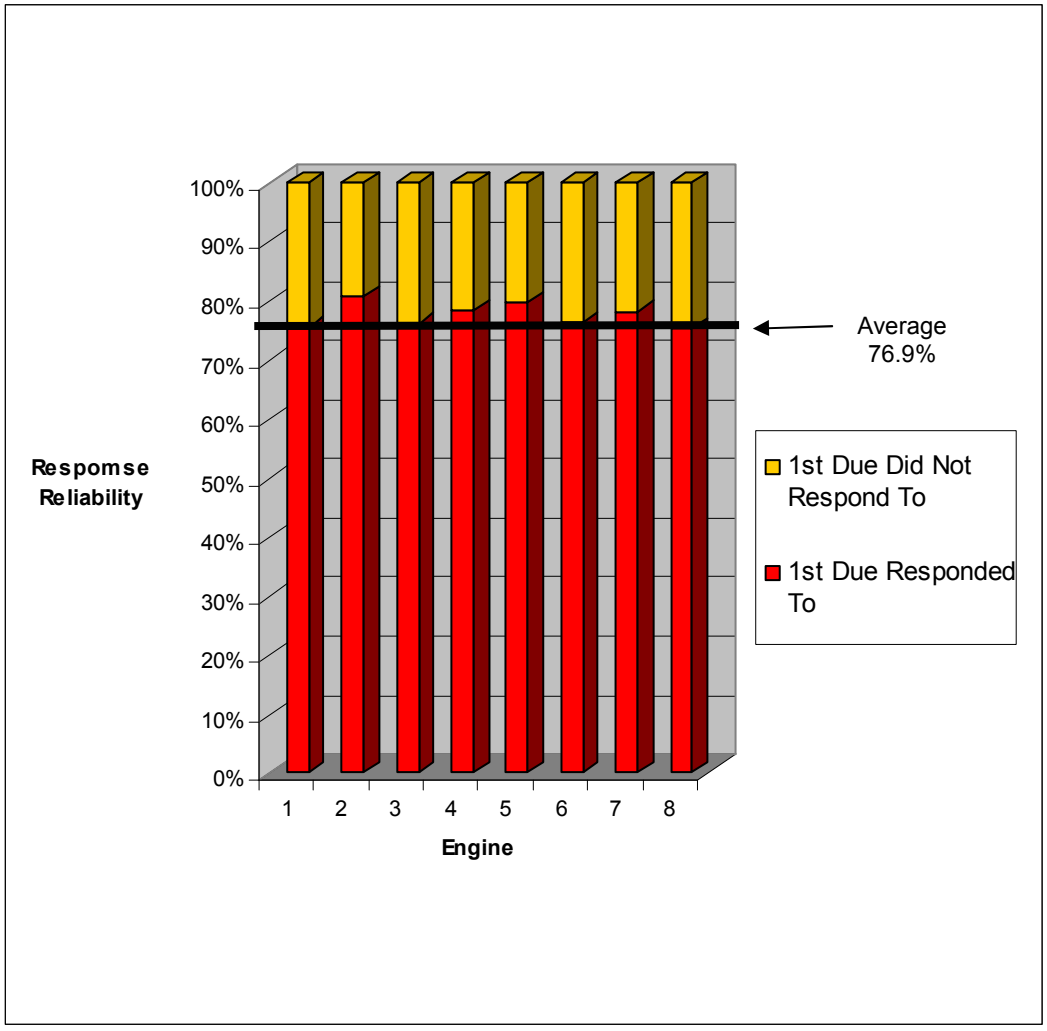


Figure 7.2 Analysis of Response Reliability By First Due Medic Unit: 2002-2004

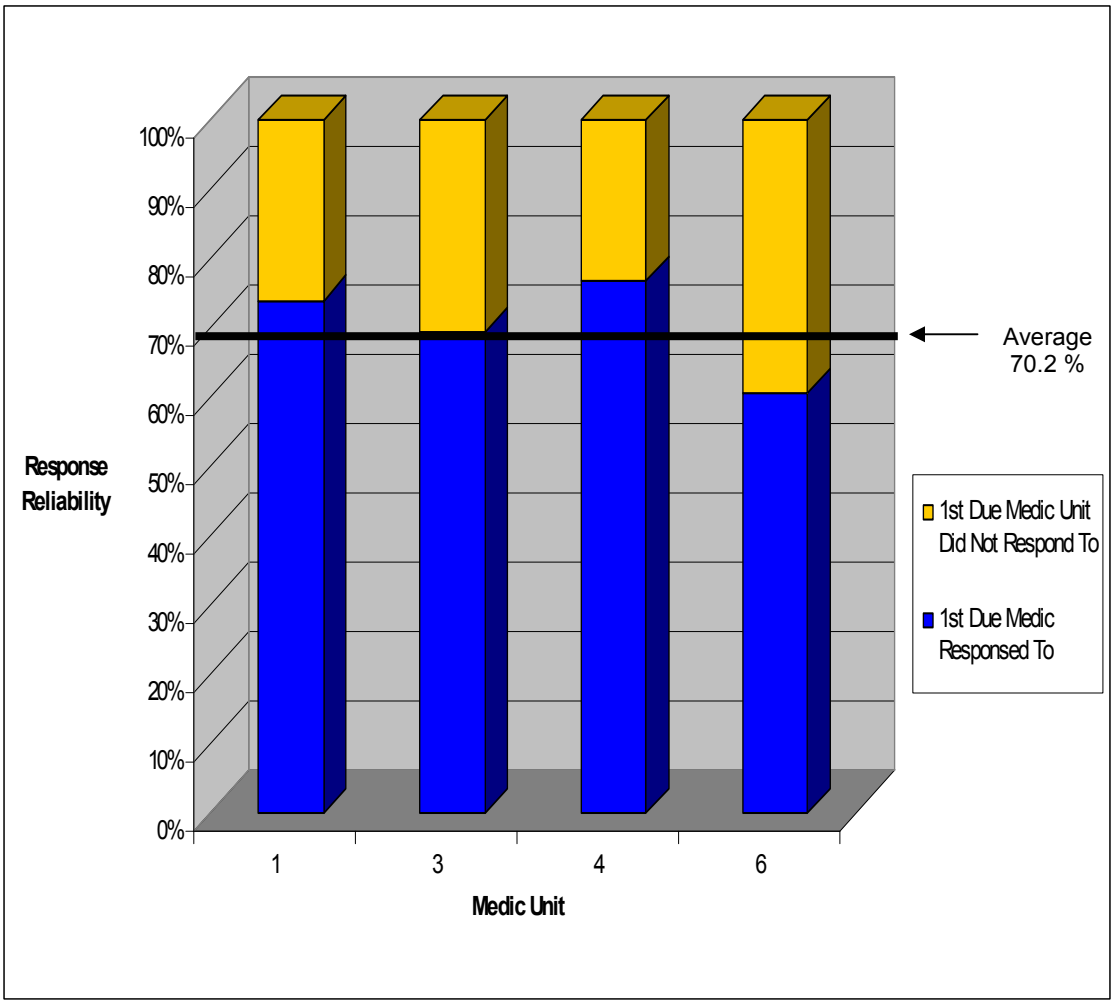


Figure 7.3 Run Distribution By Type of Apparatus: 2002-2004